DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021487
Date Inspected: 03-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job Site

CWI Name: William Sherwood and Steve Jensen

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 10E/11E top deck plate ‘A1 to A5’, QA randomly observed ABF certified welders Dan Ieraci and James Zhen perform 1G (flat position) Submerged Arc Welding (SAW) on the splice butt joint. Welder Dan Ieraci was noted welding from A1 to A3 while welder James Zhen was noted welding on A3 to A5. The welders were utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded had a single V-groove butt joint with backing bar. The plates were preheated to more than 150 °F using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and moving it the side during welding. ABF/QC William Sherwood was noted monitoring the welding parameters of both welders. QA noted the welding parameters, the workmanship and appearance of the completed cover deemed satisfactory. At the end of the shift, SAW cover pass welding was completed where the track mounted SAW wire feeder has access.

At OBG 9W/10W side plate ‘E1’ inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding fill pass on the splice butt. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using

Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was completed and the weld joint was ready for cover pass.

At OBG 8W-PP70.5-W5-SE deck access hole to top deck plate inside, QA randomly observed ABF/JV qualified welder Jorge Lopez perform CJP repair welding. The welder was noted welding in 4G (overhead) position utilizing SMAW with 1/8" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repair. The second time welding repair located at Y=3615mm and having 115mm long x 25mm wide x 7mm deep boat shape excavation profile was tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC John Pagliero was noted monitoring the welder and his welding parameters. QA noted parameter during welding was 130 amperes which appears in compliance to the WPS. During the shift, welding repair at location mentioned above was completed and the welder has moved to 6E-PP37.5-E5-N deck access hole and performed back gouging using die grinder on the welded from inside butt joint. At the end of the shift, back gouging using die grinder was still continuing and should remain tomorrow.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of five longitudinal stiffeners, one transverse stiffener and six lifting lug deck access hole butt joints. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the welds and the QC inspection complied with the contract documents.

1. 3W/4W LS4 longitudinal stiffener inside – QA MT verified
2. 3W/4W LS5 longitudinal stiffener inside – QA MT verified
3. 3W/4W LS6 longitudinal stiffener inside – QA MT verified
4. 4W-PP27-W3-#1 to #4 lifting lug access holes inside – QA VT verified
5. 5W-PP31-W3-#1 & #3 lifting lug access holes inside – QA VT verified
6. 2W-PP19.5-W2-TS transverse stiffener inside – QA MT verified
7. 2W-PP19.5-W2-LSE longitudinal stiffener inside – QA MT verified
8. 2W-PP19.5-W2-LSW longitudinal stiffener inside – QA MT verified

WELDING INSPECTION REPORT

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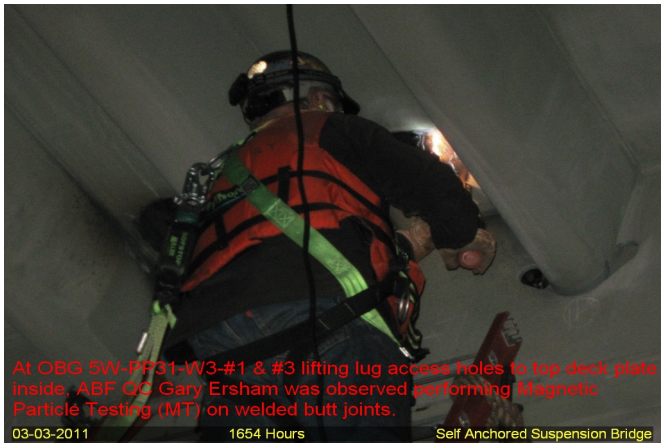

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer